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(54) Self-illuminating signs such as house numbers

(57) A panel 6 or 7 with characters such as letters or numbers or diagrams forms a sign. This incorporates a means of absorbing light when the surroundings are bright, and emitting light when the surroundings are dull or dark. Thus it can be seen in any ambient light. Parts of the sign can be permanent while other parts can be easily altered. The light can be converted to and from electrical energy. A light-sensitive switch can direct whether the device absorbs or emits light. An extra energy source can be used if insufficient energy has been stored. A transformer can also be incorporated. This device can be particularly useful for a number and/or name and/or message outside a domestic dwelling. As shown, a transparent panel 2 permits light to enter and be absorbed and converted to electrical or other energy in panels 3, 4. A sensor 5 determines whether the ambient light is bright enough for the sign to be read clearly without using the stored energy. Phosphorescent chemical may be employed.

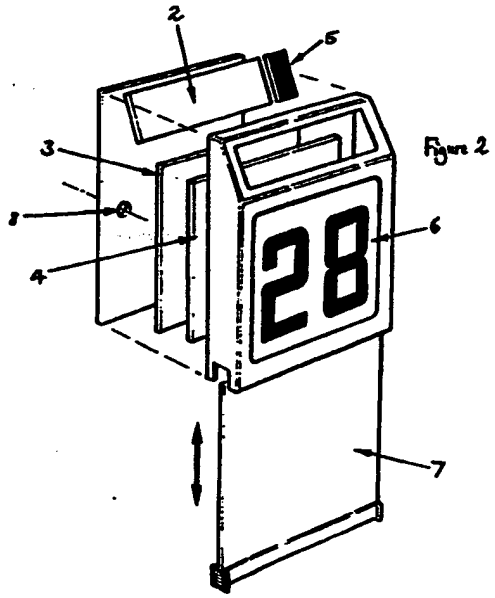

Figure 2

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SELF-ILLUMINATING SIGNS SUCH AS HOUSE NUMBERS

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The invention relates to a sign which is clearly visible when the surroundings are dim or dark, without the need for another power source such as a battery. It can be especially suitable for numbers and names mounted outside buildings to help identify the address, being easily visible when it is dark or dull as well as when bright. This will relieve a common frustration of new visitors not being able to find the building which they are looking for.

The invention comprises a panel, behind or within which light can be absorbed when the surroundings are bright and emitted when the surroundings are dark or dull, and on the front of which characters, such as numbers and/or letters and/or diagrams, can be attached or marked, in a form such as solid materials or paints or inks.

The device can operate by absorbed light, originating from the sun or other source, being converted to electricity which is stored and later converted back to light possibly under the direction of a light sensor and switch. It can be protected from rain and inclement weather or other ambient conditions by a suitable transparent material such as perspex (RTM) and a transformer might be introduced to convert the electrical voltage and for electrical isolation.

The panel can be of any colour, and of any size and shape. The characters should be of a different colour from the panel, and can be opaque or translucent.

In another form of the device, the characters (instead of or as well as the panel) can absorb light and later emit it.

Another power source, such as a battery, can be introduced, to produce the light if insufficient power has been stored. There would be less drain on this power source than if it were the only source.

In another form of the device, the light is stored and re-emitted by other means, such as using a phosphorescent chemical.

The whole apparatus, and parts of it such as individual characters, can be sold to anyone, and it would be very easy to assemble to form a message or design (which can be very attractive) as indicated by marks on the board or as the assembler wishes. This message or design could be permanent or be easily amended, or part of it (such as a house number) could be permanent while another part of it (such as a message) could be easily amended. A panel which slides into place could facilitate changing messages.

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The preferred embodiment of the invention is shown in the figure labelled "1", and is composed of parts shown in the accompanying diagram which will now be described:-

A transparent panel "2" permits light to enter the device and be absorbed and converted to electrical or other energy in panels "3" and "4" inside the device. A sensor "5" determines whether the ambient light is bright enough for the sign to be read clearly without using the stored energy, or is dull enough for the stored energy to be converted to light, and it activates a switch (not shown) accordingly. The message or design is on a fixed plate "6" in front of the device, or on a plate "7" which can be slid into the device.

Holes "8" in the back of the device facilitate attaching it to a door or wall or other support.

CLAIMS

1. A device, with a panel of any size or shape or colour and opaque or transparent, which can have characters (such as numbers, letters and diagrams) of a different colour mounted on it, part or parts of the device being able to absorb light when the surroundings are bright and emit light to the panel and/or characters when the surroundings are dark or dull, so that it forms a sign which can be seen irrespective of how bright or dark the ambient surroundings are, needing no internal power source, or (in the case of insufficient energy being stored) a lesser power source than by itself would be required to make it clearly visible.

2. A device as claimed in claim 1 which operates by converting absorbed light to electricity which is stored and later released and converted back to light which is emitted, possibly under the direction of a light-sensitive switch.

3. A device as claimed in claim 1, which is protected from adverse ambient conditions, by a transparent material such as perspex (R.T.M).

4. A device as claimed in claim 1, wherein any electrical voltage is altered and/or isolated by means of an electrical transformer or relay or other device.

5. A device as claimed in claim 1, which has a power source, such as a battery, internally or externally, which can supplement the energy which has been stored in the case where it is insufficient to make the sign clearly visible.

6. A device as claimed in claim 1 which operates by parts of it having some means other than electricity of storing light and later emitting light, such as by using a chemical which is phosphorescent.

7. A device as claimed in claim 1, which can be sold in kit form and easily put together without needing much skill, either to make a predetermined design or to make the assembler's own message or design, the whole of this design or different parts of it being permanent or capable of being altered, possibly with the aid of a panel which can slide into position.

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